

REMARKS

This amendment, submitted in response to the Office Action dated August 5, 2003, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

As a preliminary matter, Applicant requests that the Examiner acknowledge receipt of the priority document filed on December 4, 2000. As a further preliminary matter, Applicant requests that the Examiner provide an initialed copy of the IDS filed on December 4, 2000.

Claims 1-14 are pending in the present application. The Examiner rejected claims 1-14 as being unpatentable over Li et al (USP 6,594,378). Applicant submits the following in traversal of the rejection.

The present invention describes a method and apparatus for displaying two or more images on a display. The two or more images illustrate for example, a particular body part under inspection taken from different points in time. The images are displayed side by side, so that a doctor can easily view and compare the images. The images are also displayed so that the particular area of the body being inspected, and not the entire image, is aligned vertically or horizontally. Since the images are aligned based on the exact area under inspection, progression of an illness can be more accurately detected.

Li describes a method for performing subtraction processing of chest images. See Abstract and Title. A mirror image is created from an original image by reversing the original image in a horizontal direction. Column 5, lines 57-58. Rib edges of the images are detected and delineated by a snake model technique. Column 7, lines 50-52. The mirror image undergoes a Hough transform and warping and is then subtracted from the original image.

Column 12, lines 54-58. In displaying the subtraction image, the original image outside the lung region is kept in the subtraction image to maintain an appearance of a chest background.

Column 12, lines 59-63.

Claims 1 and 8

The Examiner maintains Li discloses displaying two or more images in a row or column with the positions of a structural feature area of an identical object are aligned horizontally or vertically, citing column 2, lines 23-29 and column 6, lines 1-9 in support.

The respective column and lines cited by the Examiner describe warping an image prior to subtraction in order to obtain an image which is comparable to an original image and the detection of rib edges. Nothing is indicated regarding displaying two or more images in a row or column with a structural feature area being aligned horizontally or vertically. Since it appears that the image formation and subsequent warping can be performed mathematically, the display as claimed need not be performed.

Furthermore, upon viewing the figures of Li, it does not appear that two or more images are displayed together in a row or column. In particular, only Fig. 13d displays more than one image (subtraction image and original chest image). Column 12, lines 59-63. The remaining figures illustrate only an original image, a mirror image or a subtraction image. In Fig. 13d, the original image and the subtraction image are overlaid. Therefore, the two or more images are not displayed in a row or column. Furthermore, both the subtraction image and the original chest image are aligned so that the outline of the chest can be seen in relation to the subtraction image. Since the entire image is aligned, a structural feature area of an object in the two images displayed together in a row or a column.

Since all of the elements of claim 1 are not taught in the prior art, claim 1 and its dependent claims are not anticipated. Since claim 8 describes subject matter similar to claim 1, claim 8 and its dependent claims are patentable for the same reasons.

Claims 3 and 10

Claims 3 and 10 describe that each of the two or more images are original images. The Examiner maintains Li column 2, lines 23-29 describes the elements of claims 3 and 10. The respective column and lines cited by the Examiner describe warping two lungs of a mirror image prior to subtraction so that rib structures in the mirror image become comparable to those in an original image. Based upon this description, it appears that only one of the images is an original image, the other being a derived mirror image. Since Li teaches only one original image and not two or more original images to be compared, claims 3 and 10 should be deemed patentable.

Claims 4, 6, 11, and 13

The Examiner maintains Li column 9, lines 45-55 describe the two or more original images are taken at different points in time, as described in claims 4, 6, 11 and 13. The respective section of Li cited by the Examiner describe a chest image and a mirror image of a chest image, warping of a mirror image and determining a shift value of an image. At no point does Li describe that the two or more original images are taken in different points in time. In particular, as indicated above, Li does not disclose the use of two or more original images.

Furthermore, assuming Li does disclose the use of two or more original images, there is no indication that the images were taken at different points in time and the Examiner has not established otherwise. The processing of an original and an image mirror reflect a condition at a single point in time. Therefore, claims 4, 6, 11, and 13 should be deemed patentable.

Claims 5 and 12

Claims 5 and 12 describe that the two or more images include one of a plurality of original images and a subtraction image which is derived by matching positions of two images selected out of the plurality of original images taking a differential between the selected two images.

The respective section of Li cited by the Examiner (column 14, lines 34-56) describes the differential between a warped image and a current image. Since a warped image and a current image are used to obtain a subtraction image, a subtraction image is not derived by matching positions of two original images and taking a differential between the two original images. Therefore, claims 5 and 12 should be deemed patentable.

Claims 7 and 14

Claims 7 and 14 describe that each of the two or more images is added onto an image display one by one. The Examiner cites column 9, lines 21-28 in support of a rejection. The respective section cited by the Examiner describes snaxels of an image which are used to determine a rib edge. Column 7, lines 50-53. Applicant submits that it is unclear how determining rib edges relates to the display of images.

Assuming *arguendo*, the Examiner is maintaining that the snaxels represent the two or more images displayed one by one, these are not the same images initially cited by the Examiner.

Also, assuming the snaxels are images, they are not added onto an image display one by one. It appears that a snake, which contains a plurality of snaxels, is displayed at a given time, in order to form an outline of a rib edge. See Fig. 7 and corresponding text.

Claim 8

Claim 8 describes an image display means for displaying two or more images and a position matching means for arranging the two or more images in a row or column, which is not described in claim 1. Since the Examiner has not established that all of the elements of claim 8 are taught in the prior art, claim 8 and its dependent claims should be deemed patentable.

Finally, Applicant has added claims 15-25 to provide a more varied scope of protection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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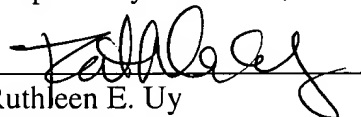
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